

XLI.—*A Synopsis of the British Rubi.*

By CHARLES C. BABINGTON, M.A., F.L.S., F.G.S. &c. * .

[Continued from p. 247.]

†† Aculei inæquales, sparsi, in aciculos setasque adeuntibus.

22. *R. fusco-ater* (Weihe); caule decumbente anguloso sparsim piloso setoso, aculeis multis inæqualibus rectis, foliis quinatis opacis subtus pallidis mollibus nitidis sericeis, *foliolo terminali cordato-ovato acuminato undulato, infimis intermediis incumbentibus*, paniculæ inferne foliosæ setosæ ramis corymbosis.

R. fusco-ater, *Rub. Germ.* 72. t. 26.

R. Radula (*Lindl.*), *Leight.* !

Barren stem with numerous rather unequal moderately large prickles, and more or less numerous unequal smaller ones connecting them with the small aciculi and the setæ. Petioles with strong declining or deflexed prickles, lower leaflets (in our plant) nearly or quite sessile, terminal leaflet rather broad at the base, all pale green beneath. Panicle clothed with numerous short hairs and setæ and long and strong prickles. Calyx patent or loosely reflexed from the fruit.

β. *candicans*; caulis petiolorumque aculeis paucioribus pilis numerosioribus, foliis subtus albis, foliolo terminali rotunde obovato, infimis petiolatis, panicula hirsuta.

R. Radula, *Lees MSS.* !

γ. *echinatus*; caulis petiolorumque aculeis multis, foliis concoloribus subtus duris rigide pilosis, foliolo terminali obovato, infimis petiolatis, paniculæ pilis longis setis aciculisque longioribus aculeis crebris minimis tenuibus.

R. echinatus, *Lindl.* ! *Syn. ed.* 1. 94; *Leight.* ! *Fl. Shrop.* 235. not *Bab.*

Isle of Wight and Dorset, *Dr. Bell Salter*; Shropshire; Leicestershire, *Rev. A. Bloxam.* β. Little Malvern, Worcestershire, *Mr. E. Lees.* γ. Almond Park, Salop. July and August.

Obs. 1. I have received from my friend the Rev. W. H. Coleman a plant gathered in Mangrove Lane, Hertford, which appears to be referable to the type of this species. Its leaves are almost exactly cordate and cuspidate, glabrous above, very finely tomentose beneath; the petioles have fewer prickles. The barren shoot has scarcely any hairs, few setæ, very few and short aciculi; its prickles are rather numerous and mostly large and equal, but there are a few very unequal and smaller. Another plant sent to me by Mr. F. Adamson, who states that it is "not uncommon near Gouroch" in Renfrewshire, has fewer large prickles on its

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barren shoots than Mr. Coleman's plant, and about the same amount of setæ, aciculi and hairs; its petioles and flowering shoot are armed in the manner usual to the species. These plants are very nearly allied to those included in the preceding section, and might without much impropriety be placed in it; but they are so closely connected by intermediate forms with the type of *R. fusco-ater*, and that through the *var. echinatus* with *R. Kœhleri*, that I feel confident that this is their true position. Indeed the armature of the barren shoots, if carefully examined, will be found to be rather that of this section than of the preceding.

23. *R. Kœhleri* (Weihe); caule decurvato procumbenteve hirtose-
toso, aculeis multis validis inæqualibus sæpissime rectis, foliis quinatis opacis subtus hirtis mollibus, foliolo terminali obovato vel elliptico acuminato, infimis intermediis dissitis, panicula ramosa inferne foliosa spinosa setosa, sepalis patentibus fructuve reflexis.

α. *Kœhleri*; aculeis permultis inæqualibus rectis paulo declinatis, pilis paucis, foliolo terminali obovato acuminato, paniculæ superne tomentosæ ramis corymbosis patentibus aculeis multis longis rectis.

R. Kœhleri, *Rubi Germ.* 71. t. 25; *Eng. Bot. Suppl.* 2605.

The surface of the barren stem is almost covered by the very unequal prickles, aciculi and setæ. Leaves pale green beneath, coarsely serrate; general and partial stalks and midrib beneath very prickly; stipules linear. In a subvariety the leaves have fewer prickles on their midrib and stalks and linear-lanceolate stipules; its barren stem is rather less prickly. In another form the prickles on the panicle are rather hooked.

β. *cuspidatus*; aculeis brevibus rectis horizontalibus, pilis paucis, foliolo terminali obovato cuspidato, paniculæ superne tomentosæ, ramis corymbosis brevibus patentibus setis multis aculeis paucioribus brevibus rectis.

R. glandulosus, *Sm.* ! *Eng. Fl.* ii. 403. *exc. syn.*

I do not find a figure of this plant in the 'Rubi Germanici.' Its aspect is considerably different from the typical *R. Kœhleri*, and it may be known by its cuspidate leaves, which are usually deeply inciso-serrate at the end, and the fewer and shorter prickles throughout. I believe this to be the *R. apiculatus* from Beeston Castle referred to by Dr. Salter (*Phytol.* ii. 132). In some forms of this plant the leaves are very much truncated, and in a specimen from Killarney, quite abrupt like those of *R. Lingua*.

γ. *pallidus*; aculeis tenuibus rectis declinatis, pilis multis, foliolo terminali obovato-elliptico acuminato, paniculæ superne subtomentosæ ramis racemoso-corymbosis setis multis aculeis multis brevibus validis declinatis deflexisve.

R. pallidus, *Rub. Germ.* 75. t. 29.

When the leaves are ternate, as occasionally occurs, this is al-

most exactly *R. apiculatus* (Weihe), 'Rub. Germ.' t. 24, in which the leaves are sometimes quinate, and are so represented on that plate; but the leaves of our plant are not "pubescenti-albida" on the under side.

δ. *infestus*; *aculeis* multis *validis* brevibus *valde declinatis*, pilis setis aciculisque brevissimis paucis, *foliolo terminali oblongo-acuminato* subtus pallide viridi tomentoso, paniculæ oblongæ ramis brevibus paucifloris *aculeis multis longis tenuibus declinatis*.

The short declining or even hooked prickles with very thick bases are characteristic of this plant. Its panicle is nearly simple, with a few simple floral leaves below and lanceolate or trifid bracts in its upper part. It differs slightly from *R. infestus* (Weihe), 'Rub. Germ.' t. 30, which has roundish-cordate leaflets and shorter prickles on the panicle.

ε. *fuscus*; *aculeis* paucioribus *declinatis*, aciculis setis pilisque multis, *foliolo terminali elliptico subcordato cuspidato*, paniculæ angustæ ramis brevibus paucifloris corymbosis *aculeis brevibus tenuibus*.

R. fuscus, *Rubi Germ.* 73. t. 27.

R. fusco-ater (*Lindl.*), *Leight. Fl. Shrop.* 235.

R. Kœhleri β. *fuscus-ater*, *Bab. Man.* 97.

The panicle of this plant is usually furnished with numerous long unequal setæ standing prominently out from its hairy covering; but in a plant from Bearhaven, co. Cork, which seems referable to this variety, the setæ on that part are almost altogether wanting, and the few that exist are hidden in the dense hairy coat.

Very common. β. Rydal Woods, Westmoreland, *Mr. Borrer*; Dumfries-shire; Durham; Killarney. γ. Near Bath; Stock Gill near Ambleside, *Mr. Borrer*; Worcestershire, *Mr. Lees*. Near Ware, Herts, *Rev. W. H. Coleman*. δ. Killarney. July and August.

Obs. 1. The several plants which I have now included under the name of *R. Kœhleri* have all been considered as distinct species by high authorities. I firmly believe that they are so connected together by intermediate forms as to constitute but one species. It is often difficult to determine under which of the named forms some specimens should be ranged. They are all well marked by the numerous strong and very unequal prickles on the barren shoots, of which the smaller so merge in aciculi and stiff aciculiform setæ, those in true setæ and these last in hairs, that it is impossible to say where one of those forms of armature begins and another ends. The typical variety is known by its very strong and very numerous prickles combined with acuminate leaflets; β. by similar but shorter prickles and cuspidate leaflets. In γ. the prickles of the barren stems are more

slender, whilst those of the panicle are increased in strength and sometimes even hooked, those of the same part in α . and β . being straight. The *var.* δ . is well marked by its short stout declining or often hooked prickles accompanied by long slender ones on the panicle. And the great decrease in the number of the larger prickles, combined with the increased number of aciculi, setæ and hairs in *var.* ϵ , point out its relationship to the next species. By the kindness of Mr. Lees, I possess two specimens of a plant from "the western base of the Malvern Hills" closely resembling *var.* ϵ ; it is densely hairy throughout, but has very few setæ or aciculi on the barren stems.

Obs. 2. A specimen received from Mr. Lees under the name of *R. pallidus* β . *foliosus* (Lees), seems to occupy an intermediate station between this and the next species; it may be described as follows, and should its peculiar panicle prove constant is probably specifically distinct.

Stem procumbent (?), angular, dark purple, hairy; setæ very numerous and unequal; prickles numerous, slightly declining, straight, rather strong, yellow. Leaves quinate or ternate (?), opaque above, hairy, soft and paler beneath; terminal leaflet broadly obovate cuspidate. *Panicle very long*, with numerous short *axillary* ascending corymbose (?) *branches*, the three uppermost extrafoliaceous and subtended by long foliaceous bracts; rachis and peduncles very hairy, and with numerous unequal yellowish setæ with purple heads, and straight slender declining yellow aciculi and prickles; *floral leaves* pilose above, soft beneath, *simple* and cordate-ovate, 3-lobed, or the lower ones ternate. Calyx hairy, with numerous unequal setæ and aciculi; sepals with a long leaflike point. Plant only in bud.

Found on the "banks of the Wye near Vaga Cottage, Great Doward, Monmouthshire," *Mr. E. Lees*.

24. *R. hirtus* (W. et N.); caule "procumbente tereti" hirtosetoso, aculeis parvis tenuibus valde inæqualibus multis rectis declinatis, foliis quinatis vel ternatis concoloribus pilosis subtus hirtis, foliolo terminali ovato-cuspidato vel ovato-lanceolato, paniculæ valde setosæ tomentosæ vel hirtæ aciculatæ racemosæ inferne foliosæ *setis valde inæqualibus* purpureis, sepalis patentibus fructuive adpressis setosis.

Setæ very numerous and very unequal. Panicle with rather distant axillary branches, which are somewhat corymbose and short; in a Scottish specimen the panicle is quite simple. Upper part of the flowering shoot with strongly deflexed or declining prickles.

α . *hirtus*; foliis magnis quinatis, foliolo terminali ovali cuspidato, panicula tomentosa.

R. hirtus, *Rub. Germ.* 95. t. 43.

β . *Menkii*; foliis mediocribus quinatis vel ternatis, foliolo terminali ovali-lanceolato, panícula hirta, sepalis aciculatis.

R. *Menkii*, *Rub. Germ.* 66. t. 22.

Rare. α . Dumfries-shire. Alborne, Sussex, *Mr. Borrer*. Almond Park, Salop. β . Mount Nod near Tunbridge Wells, *Mr. Borrer*; Haughton Dale, Cheshire, *Mr. Sidebotham*.

Obs. 1. It is very difficult to point out upon paper any good character by which to distinguish this plant from the following, between which and *R. Kœhleri* it forms the connecting link.

Obs. 2. The Rev. W. H. Coleman has sent a specimen under the name of *R. horridissimus* (Colem. MSS.) which seems to be referable to this species. The panicle appears to have been taken from a young plant, and so does not admit of accurate determination; it is short, narrow, nearly simple; the two lower axillary branches 3-flowered, very short; the rest single-flowered and short. Barren shoot rather angular, thickly covered with prickles, aciculi, setæ and hairs merging gradually into each other; prickles slender, nearly or quite straight, declining. Petioles both general and partial, similarly armed, except that the prickles are deflexed and the hairs much more numerous. Leaves quinate, dull green and pilose above, rather paler, hairy and finely tomentose beneath. Terminal leaflet oblong-obovate acuminate. This plant is well deserving of attention; it was found in Easney Park Wood near Ware, Hertfordshire, in flower on the 26th of June 1844.

25. *R. glandulosus* (Bell. !); caule arcuato declinatove tereti vel subanguloso hirta setoso, *aculeis parvis tenuibus* inæqualibus rectis declinatis, *foliis ternatis* vel quinatis concoloribus pilosis subtus hirtis, foliolo terminali ovali obovato vel obovato-lanceolato, paniculæ valde setosæ hirtæ vel tomentosæ aciculatæ corymbosæ inferne - foliosæ *setis brevibus subæqualibus* purpureis, sepalis fructui laxè adpressis reflexisve setosis.

α . *Bellardi* (Bell Salt. !); caule tereti sparsim piloso valde setoso, *aculeis parvis* permultis, *foliolo terminali ovato* cuspidato æqualiter subtiliterque serrato, paniculæ tomentosæ aculeis multis tenuibus rectis horizontalibus apice et ramis paucis longis distantibus paucifloris corymbosis.—*Ann. Nat. Hist.* xvi. 370.

R. *Bellardi*, *Rub. Germ.* 97. t. 44.

R. *glandulosus*, *Eng. Bot. Suppl.* 2883.

β . *Lejeunii* (Bell Salt. !); caule subanguloso sparsim piloso setoso, *aculeis plurimum parvis* nonnullis longioribus, foliolo terminali ovali cuspidato vel obovato-lanceolato inæqualiter subtiliterque serrato, *paniculæ ramosæ valde tomentosæ* setis multis reconditis brevibus aculeisque tenuibus declinatis vel subreflexis.

R. *Lejeunii*, *Rub. Germ.* 79. t. 31.

γ . *rosaceus* (Bell Salt. !); caule subanguloso hirta valde setoso, aculeis valde inæqualibus, foliolo terminali obovato vel obovato-

lanceolato acuminato *grosse* inæqualiter serrato, paniculæ inferne ramosæ (sæpe ramis duobus maximis) corymbosæ superne hirtæ *setis longis prominentibus* aculeis declinatis vel subdeflexis.

R. rosaceus, *Rub. Germ.* 85. t. 36.

Rare. *a.* Terrington Car, Yorkshire, *Mr. Spruce.* *β.* Selborne, Hants, *Dr. Bell Salter*; Houghton Vale, *Mr. Sidebotham*; Channel Islands. *γ.* Selborne, Hants, *Dr. Bell Salter*; Twycross, Leicestershire, *Rev. A. Bloxam*; S. Molton, Devon; Guildford, Isle of Wight. July and August.

Obs. 1. Observation both of the wild and cultivated plants teaches us that these three varieties are only forms of one species. Although believing this and the preceding species to be specifically distinct, I have found very considerable difficulty in defining them, so as at the same time to include all the varieties of each and also distinguish the species. The leaves of this are nearly always ternate, those of *R. hirtus* quinate, but they both vary in this respect. In that the panicle is rather racemose than corymbose, the contrary being the case in *R. glandulosus*. Here the setæ are usually short, and but little longer than the hairs on the panicle, and mostly equal in length (in *R. Bellardi* (Weihe) they vary in this respect, and on foreign specimens are often very variable both in length and number), in that they are many of them very long and prominent and very various in length.

Obs. 2. Dr. Bell Salter considers my plants from the Channel Islands to be *R. rosaceus* (Weihe), and therefore refers the *R. Lejeunii* of my 'Manual' (p. 97) to that variety. They seem to me to correspond far more with the figure and description of *R. Lejeunii* (Weihe) as given in the 'Rubi Germanici.' Similarly he refers the plant found at Guildford in the Isle of Wight, and at Twycross, Leicestershire, to *R. Lejeunii*, whilst I consider it to belong to *R. rosaceus*. This shows how closely the plants are allied.

26. *R. humifusus* (Weihe); caule procumbente tereti hirto setoso, *aculeis tenuissimis inæqualibus multis* declinatis, foliis ternatis vel quinatis subtiliter inæqualiterque serratis subtus pallide viridibus pilosisque, *foliolo terminali cordato-ovato cuspidato*, paniculæ ramosæ inferne foliosæ pilis laxis *setis prominentibus aculeisque longis tenuibus* declinatis.

R. humifusus, *Rubi Germ.* 84. t. 35.

Stems, flowering shoots, peduncles and petioles beautifully clothed with slender yellow prickles and aciculi which have a purple base and pass insensibly into very long and slender and very unequal setæ. The lower branches of the panicle elongated, ascending, 3—4-flowered; the others mostly 1-flowered. Stems slender, fuscous, purple.

Glen Falloch, Perthshire. July and August.

27. ? *R. Schleicheri* (Weihe ?) ; caule arcuato vel procumbente subanguloso vel subtereti pilis setisque sparsis, aculeis sparsis inæqualibus rectis declinatis, foliis quinatis vel ternatis pilosis subtus viridibus molliter pubescentibus, foliolo terminali rotundo breviter acuminato inferne attenuato, paniculæ parvæ setosæ ramis 3—4 distantibus valde paucifloris brevibus corymboque terminali simplici : aculeis multis longis rectis declinatis, sepalis fructus erecto-patentibus.

R. Schleicheri, *Leight. ! Fl. Shrop.* 237 ; *Bell Salt. ! in Phytol.* ii. 131.

Rare. Shropshire, *Rev. W. A. Leighton* ; Hants, *Dr. Bell Salter*. July and August.

Obs. 1. Although *Dr. Salter* and I have continued the use of the above name for this plant, we are far from being convinced that it is the species figured and described in the ‘*Rubi Germanici*’ ; I have therefore not quoted that work. *Leighton* sent specimens to *Nees von Esenbeck*, who named them as above, but that does not remove my doubts. Neither am I satisfied that this is a distinct species ; it has much the appearance of a plant in one of its earlier stages of growth.

28. *R. Wahlbergii* (*Arrh.*) ; caule arcuato obtusanguloso, pilis setisque paucis vel subnullis, aculeis multis valde inæqualibus, foliis quinatis subtus pallide viridibus, foliolo terminali late ovato acuminato inferne cordato, ramorum floriferorum cordato inferne lato, panicula longa foliosa aciculata, sepalis fructus patentibus, petalis obovatis inferne attenuatis, “stylis virescentibus.”

R. Wahlbergii, *Arrhen. Rub. Succ.* 43 ; *Godron, Rub. Nancy*, 16 ; *Bell Salt. ! in Ann. Nat. Hist.* xvi. 371.

Stem nearly terete at its base, obtusely angular above. Prickles very numerous and very unequal, straight, rather declining ; on the autumnal shoots and the petioles hooked. Leaves cuspidate-dentate-serrate. Stipules of the flowering shoot narrow. “Torus conical. Fruit blue-black.” Panicles with very numerous, long, strong, declining prickles.

Hedges in the south of England. August.

Obs. 1. In some states this plant closely resembles *R. corylifolius*, which differs from it by having equal prickles on a subterete stem, those on the petioles nearly straight ; the torus “roundish-clavate.” Between this and the following species the specific character is a sufficient distinction.

Obs. 2. A state of arrested development occurs in this plant in more shady places when the plant is suberect and the panicle very short with large leaves amongst the flowers ; it is the *R. Wahlbergii* β . *frustratus* (*Bell Salt.*), ‘*Ann. Nat. Hist.*’ xvi. 371. Similar states occur in other species.

29. *R. nemorosus* (“*Hayne*”) ; caule arcuato subanguloso, pilis se-

tisque paucis, aculeis multis valde inæqualibus, foliis quinatis subglabris subtus pallidioribus mollibus, *foliolo terminali rotundato-cordato* cuspidato, *ramorum floriferorum ovato inferne attenuato*, panicula subsimplici, petalis subrotundis, "stylis dilute carneis."

R. nemorosus, "*Hayne, Arzneyg.* iii. t. 10;" *Wimm. et Grab. Fl. Siles.* ii. 34; *Arrhen. Rub. Suec.* 45.

R. dumetorum, *Rub. Germ.* 98. t. 45; *Godron, Rub. Nancy*, 12; *Bab. Man.* 97.

R. corylifolius, *Wallr. Sched. Crit.* 230.

Stem nearly terete at its base, obtusely angular above. Prickles most numerous and shorter near to the base of the stem, straight, nearly horizontal; on the autumnal shoots and the petioles hooked. Leaves cuspidate-serrate. Stipules of the flowering shoot narrow. "Torus conical. Fruit blue-black."

α. glabratus; foliis subtus hirtis pallide viridibus, caule florifero tomentoso, caule subtereti subglabro.

β. pilosus; foliis subtus molliter hirtis pallide viridibus, caule florifero et sterili subtereti tomentosis.

γ. bifrons; foliis subtus albidis tomentosis, caule florifero tomentoso pedunculis pedicellisque aculeis longis rectis validis armatis, caule subglabro similiter aculeato.

R. bifrons, *Vest. in Tratt. Ros. Monog.* iii. 28.

δ. horridus; foliis subtus viridibus pilis longis mollibus ornatis, caule florifero hirto aculeis multis longis subtenuibus, sepalis sæpissime aciculatis, caulis aculeis multis longis inæqualibus declinatis.

R. diversifolius (*Lindl.!*), *Leighton, Fl. Shrop.* 237.

Hedges and thickets. July and August.

Obs. 1. There seems to be no doubt of this being the plant intended by Hayne, although I have not seen the work quoted, and as his name is older than that of Weihe I have adopted it. None of the figures in the 'Rubi Germanici' exactly represent our plants.

Obs. 2. Some of the forms of this plant, especially *var. γ*, have been mistaken for *R. corylifolius* (Sm.), from which it differs in the same respects as the preceding species.

30. *R. cæsius* (Linn.); caule procumbente tereti glauco, aculeis tenuibus subulatis inæqualibus rectis, *foliis ternatis, foliolo terminali rhomboideo-ovato* acuminato, panicula simplici, "petalis obovatis emarginatis stylis virescentibus," sepalis fructui glauco adpressis.

R. cæsius, *Eng. Bot.* 826; *Rub. Germ.* 102. t. 46.

Stems usually slender. Prickles very various in number but always slender. Occasionally the terminal leaflet is divided quite to its base into three distinct leaflets, the whole thus forming a quinate-pinnate leaf, when the plant is the variety *pseudo-idaeus*

of the 'Rubi Germanici'; sometimes, in the variety *pseudo-cæsius* of the same work, that leaflet is deeply three-lobed and slightly cordate below; both may be found upon the same stem. The lateral leaflets are often deeply divided into a larger and a smaller lobe, but I have never seen true *R. cæsius* with the lobes separated into distinct leaflets, neither do authors mention any such case.

Hedges and thickets. June to August.

Obs. The ternate leaves, of which the lateral leaflets are strongly lobed below, and the terminal leaflet rounded but scarcely ever at all cordate at its base, all of them coarsely serrate, inciso-serrate or even lobed; the very slender prickles on the round stem; the simple panicles and glaucous fruit, which usually consists of very few large drupes; distinguish this plant from all the preceding, except *R. tenuis*, in which the prickles are much stronger on all parts of the plant, and there are no setæ on the barren stem.

B. HERBACEI.

31. *R. saxatilis* (Linn.); caule tenui radicante inerme vel aciculis paucis herbaceis distantibus exasperato, caule florifero erecto, *corymbo terminali paucifloro*, petalis ovalibus calycem subæquantibus, foliis ternatis.

R. saxatilis, *Eng. Bot.* 2233; *Rub. Germ.* 30. t. 9.

Root perennial. Rooting stems annual, very slender and long. Flowering shoots 3—12 inches high, downy. Flowers yellow. Fruit of 1—4 large red drupes.

Stony mountains; rare. July and August.

32. *R. arcticus* (Linn.); caule erecto inermi herbaceo, flore terminali solitario, petalis obovatis calyce duplo longioribus, staminibus conniventibus, foliis ternatis.

R. arcticus, *Eng. Bot.* 1585; *Rub. Germ.* 3. t. 48.

Root perennial. Stems subterraneous, creeping. Flowering shoots 4—6 inches high. Flowers rose-coloured. Fruit of rather numerous purplish-red drupes.

Said to have been found on mountainous parts of the isle of Mull, *Rev. Dr. Walker*; and on Ben-y-Glo, *Mr. Cotton*; but a very doubtful native. May.

33. *R. Chamæmorus* (Linn.); caule erecto inermi herbaceo, flore terminali solitario, *foliis simplicibus lobatis plicatis*.

R. Chamæmorus, *Eng. Bot.* 716; *Rub. Germ.* 113. t. 49.

Root perennial. Stems subterraneous, creeping. Flowering shoots 6—10 inches high. Flowers large, white, diœcious. Fruit large, red, afterwards orange-yellow.

Alpine turfy bogs. June.